based on results calculated by the first change rate calculating means and the enlargement factor of the first markers.

18. The radiation imaging apparatus of claim **17**, wherein the second calculating means comprises

angle calculating means configured to calculate, at every value of the predetermined radiation angles, actual values of the radiation angles of the X-ray beam based on information of the third markers imaged in the image,

second change rate calculating means configured to calculate the rate of changes between the movement distance of the detection surface of the detector and the frame numbers of the data and the rate of changes between the projection angles of the X-ray flux radiated from the X-ray source to the object and the frame numbers, at each of the actual values of the radiation angles of the X-ray beam, and

second information calculating means configured to calculate, based on results calculated by the second change rate calculating means and the enlargement factor of the second markers, every one of the actual values of the radiation angles of the X-ray beam, the third distance from the rotation center to the imaging portion, an amount of positional changes of the rotation center, and the coordinate position of the rotation center.

19. The radiation imaging apparatus of claim **18**, wherein the apparatus comprises a third calculating means,

the third calculating means comprising

tomographic plane setting means configured to set a plurality of tomographic planes which are positionally different from the referential tomographic plane in consideration with the first distance, the second distance, the rate of changes of the projection angles to the frame numbers, the third distance, and the amount of positional changes of the rotation center,

reconstructing means configured to use data of the images to reconstruct an image of each of the plurality of tomographic planes set by the tomographic plane setting means, and

identifying means configured to three-dimensionally identify actual positions showing the imaging portion using the reconstructed plural images, along a direction viewing the X-ray source, based on the actual values of the radiation angles and the coordinate positions of the rotation center.

20. The radiation imaging apparatus of claim **17**, the second calculating means comprises

second change rate calculating means configured to calculate the rate of changes between the movement distance of the detection surface of the detector and the frame numbers of the data and the rate of changes between the projection angles of the X-ray flux radiated from the X-ray source to the object and the frame numbers, at each of the predetermined radiation angles of the X-ray beam, and

second information calculating means configured to calculate, based on results calculated by the second change rate calculating means and the enlargement factor of the second markers, every one of the actual values of the radiation angles of the X-ray beam, the third distance from the rotation center to the imaging portion, an amount of positional changes of the rotation center, and the coordinate position of the rotation center.

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